
Presented by:
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Date: April 6, 2011
Location: Austin, Texas, Maryland
Purpose

- Review Washington’s Nighttime Seat Belt Enforcement Project and its outcomes;
- Could the traditional “Click-It-Or-Ticket” Model be modified for effective implementation at night; and
- Could these initiatives replicate seat belt use rates experienced during the day?
Purpose:

- Determine if this strategy produced desired outcomes in other areas of traffic safety and

- Learn if this strategy produces positive outcomes when identifying high risk drivers and interdicting crime.
National Agenda for Transportation Safety (SAFETEA-LU)

Governor's Priorities

Washington Transportation Plan (WTP)

Washington Strategic Highway Safety Plan

Engineering

Enforcement

Emergency Medical Services

Education
1986-2009 Washington Seatbelt Use & Vehicle Occupant Fatality Rates*

By Year, *Percent of Motorists Observed Wearing Seatbelts, Occupant fatalities per 100 million vehicle-miles traveled

Source: FARS, WSDOT, WTSC Seatbelt Observation Survey

*Seatbelt survey not conducted in 1990.

Source: FARS, WSDOT, and NHTSA
Media Mentions

- TV: 41.9%
- Radio: 31.4%
- Road Sign: 23.4%
- Newspaper: 13.5%
- Billboard: 8.8%
- Police: 2.1%

Percent Exposed:

- Min: 5.4%
- Max: 41.9%

Media mentions include:

- TV
- Radio
- Road Sign
- Newspaper
- Billboard
- Police
Patrols in major population areas:
Number of Vehicle Occupant Deaths
WA 1994-2008

Source: FARS
Daytime: 5 AM - 6:59 PM | Nighttime: 7 PM - 4:59 AM
Vehicle occupant deaths with unknown crash hour excluded from analysis.
Number of Vehicle Occupant Serious Injuries
WA 1994-2008

Source: WSDOT
Daytime: 5 AM - 6:59 PM | Nighttime: 7 PM - 4:59 AM
Vehicle occupant deaths with unknown crash hour excluded from analysis.
Change in Vehicle Occupant Deaths by Age Group

Difference in Deaths per Year from 2005-06 to 2007-08

Washington Vehicle Occupant Deaths by Age Group
Difference in Deaths from 2005-06 Average to 2007-08 Average
9 fewer
12 fewer
7 fewer
5 fewer
6 fewer
4 fewer
5 fewer
29 fewer

Data Source: FARS
Vehicle occupant deaths with unknown crash hour excluded.
1986-2009 Washington Seatbelt Use & Vehicle Occupant Fatality Rates*
By Year, *Percent of Motorists Observed Wearing Seatbelts, Occupant fatalities per 100 million vehicle-miles traveled

Source: FARS, WSDOT, and NHTSA
*Seatbelt survey not conducted in 1990.
Washington Alcohol Impaired Driver-Involved Death Trend 1998-2008, By Year, *Night-Time Only* (7 p.m.-4:59 a.m.) Before and During Night-Time Seat Belt Enforcement Project

- **PRE-NTSBE**
- **NTSBE**

1.1% per year decrease in trend (1998 - 2006)

7.0% per year decrease in trend (2006-2008)

Regression Analysis Significant at .05 level

Source: FARS, Software: National Cancer Institute
Crime Interdiction (DDACTS):

- 82.5% more DUI/DUID citations;
- 532.4% more felony arrests;
- 79.5% more “other alcohol” arrests;
- 74.8% more child car seat tickets.
Washington Traffic Fatalities, 2003-2010
Cumulative annual fatalities through September

Source: FARS
Average Annual Change in Washington Fatality Trend*

By Quarter, 2001-2006 vs. 2006-2010

Quarters: 1=Jan-March; 2=Apr-June; 3=July-Sept; 4=Oct-Dec

Source: FARS

*Numbers are derived from the linear equation defining the trendline for each quarter in the period 2001-2006 and the period 2006-2010.
Nighttime High Risk Drivers

- What did this research learn about nighttime high risk drivers?
- Is a nighttime seat belt violation a strong predictor of high risk drivers who are more frequently involved in other dangerous behaviors?
High Risk Drivers

Compared to people who drive during the day with their seat belt on, nighttime unbuckled drivers are:

- **3 times** as likely to have a felony record;
- **2 times** as likely to have a criminal record for offenses that involve violence.
- **3 times** more likely to have a DUI on their record.
- **More than 2 times** more likely to have a negligent or reckless driving violation on their driving record.
Summary

Preliminary NTSBEP Data Shows:

- The CIOT Model can be successfully modified for use at night;
- Nighttime seat belt enforcement reduces deaths and serious injuries;
Summary

- There are multiple ways to conduct nighttime seat belt patrols, and all seem to work well if implemented via strong communications and dedicated law enforcement patrols; and

- There are many peripheral benefits to nighttime seat belt enforcement.
Summary

A Nighttime Seat Belt Enforcement Strategy:

- Produces positive outcomes in other areas of traffic safety (speed and impaired driving);
- Provides an effective pointer index for identifying high risk and anti-social drivers at increased rates;
- Produces increased rates of enforcement in many areas of criminal interdiction;
Summary

- A Nighttime Seat Belt Enforcement Strategy:
  - Is an excellent way to implement DDACTS with a direct connection to a priority area of traffic safety; and
  - Will be further researched in a full-time, high visibility DUI enforcement project in WA.
In times of diminishing resources and increasing public demand, developing and implementing effective enforcement strategies that produce multiple benefits and desired outcomes is essential;

Especially when they directly impact social harm, quality of life, the public’s welfare, and the economy.

DDACTS can do precisely this when combined with traffic safety initiatives like NTSBE!
Conclusion:

- By implementing Target Zero through:
  - Setting data driven safety priorities;
  - Aligning evidence based traffic safety programs and allocating resources accordingly; and
  - Using an integrated systems approach to implementing Target Zero;

- Traffic safety programs can achieve more with the available resources!
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